

**THERMAL AND PHASE STUDIES OF MAGNESIUM OXIDE
SYNTHESIZED BY USING TWO TYPES OF GELATING AGENT**

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This Final Year Project Report entitled “**Thermal and Phase Studies of Magnesium Oxide Synthesized by Using Two Types of Gelating Agent**” was submitted by Ummi Shafikah Binti Ahmad Basa, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, and was approved by

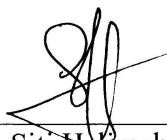


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ABSTRACT

THERMAL AND PHASE STUDIES OF MAGNESIUM OXIDE SYNTHESIZED BY USING TWO TYPES OF GELATING AGENT

Magnesium oxide (MgO) nanopowder was synthesized by using sol-gel method. The starting materials were used are magnesium acetate tetrahydrate and two types of gelating agent which are oxalic acid and tartaric acid with ethanol as a solvent. The annealing treatment involves at different time which at 1, 3 and 6 hours with different temperature at 550, 600 and 650°C. The magnesium oxide nanopowders were characterized by using thermal gravimetric analysis (TGA) and X-ray powder diffraction (XRD). The thermal behavior for both gelating agents showed their stability at 500°C and 450°C for oxalic acid and tartaric acid respectively. All products were showed their purity when all of the peaks occur at a single phase in XRD spectra.